

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

BROADCOM CORPORATION, et al.,
Plaintiffs,
v.
NETFLIX INC,
Defendant.

Case No. [3:20-cv-04677-JD](#)

CLAIM CONSTRUCTION ORDER

The parties in this patent infringement action have asked the Court to construe eight phrases in certain claims of the U.S. Patent No. 8,259,121 (the '121 patent), U.S. Patent No. 6,744,387 (the '387 patent), U.S. Patent No. 6,982,663 (the '663 patent), and U.S. Patent No. 9,332,283 (the '283 patent). In addition to the usual construction issues, the parties raised indefiniteness and means-plus-function questions for some of the phrases. The Court received full briefing from the parties and a technology tutorial, and took oral argument on claim construction.

PATENT BACKGROUND

Broadcom asserts several claims from the '121, '387, '663, and '283 patents against Netflix. The patents concern video processing. The '121 patent relates to systems and methods for video processing modules and a network for processing data. Dkt. No. 112-1 at Abstract. The patent describes "a network environment in an A/V system using A/V decoders, where the A/V decoders are adapted to process, decode, or decompress one or more input data streams." *Id.* at 1:43-45. The network forms a "display pipeline" by selecting and connecting nodes from several nodes and modules in the network. *Id.* at 2:55-59. The data is passed through the nodes by network modules. *Id.* at Fig. 6.

The '663 patent is a continuation of the '387 patent. Both are directed to a method for binarization of data in an MPEG data stream. Dkt. No. 112-3 at Abstract ('663 patent); Dkt. No. 112-2 at Abstract ('387 patent). The patents describe an “exp-Golomb” method for creating binary codewords. If a given index value is less than a given threshold, then a unary codeword is generated. Dkt. No. 112-2 at 7:63-8:1. If a given index value is greater than a given threshold, the patent describes a method for generating an initial prefix, which is in turn used to create a unary prefix, and is followed by a binary representation. *Id.* at 8:1-8:10. The method reduces the number of bins in the binarization of symbol indices. *Id.* at 6:19-21.

The '283 patent is directed to video coding and binarizations that are performed during the process of video coding. Dkt. No. 112-4 at Abstract. Binary trees are employed to code for coding unit (CU) prediction and prediction unit (PU) partition mode operations. *Id.* Frames may be divided into square shaped coding units. *Id.* at 8:52-61. The coding units are further broken into prediction units, which have varying partition modes. *Id.* at 17:19-23. The patent teaches the use of binary trees to encode the PU partition modes. *Id.* at 18:12-33.

LEGAL STANDARD

I. CLAIM CONSTRUCTION

Claim construction ““must begin and remain centered on the claim language itself, for that is the language the patentee has chosen to particularly point[] out and distinctly claim[] the subject matter which the patentee regards as his invention.”” *Source Vagabond Sys. Ltd. v. Hydrapak, Inc.*, 753 F.3d 1291, 1299 (Fed. Cir. 2014) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). Claim terms are given their “ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005) (en banc) (internal quotation omitted). “The subjective intent of the inventor when he used a particular term is of little or no probative weight in determining the scope of a claim (except as documented in the prosecution history).” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 985 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). “Rather the focus is on the objective test of what one of ordinary skill in the art at the time of the invention would have

1 understood the term to mean.” *Markman*, 52 F.3d at 986. The parties do not dispute the definition
2 of a person of ordinary skill in the art.

3 As the Federal Circuit has underscored, the “only meaning that matters in claim
4 construction is the meaning in the context of the patent.” *Trustees of Columbia Univ. v. Symantec*
5 *Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016). The presumption in favor of giving terms their plain
6 and ordinary meaning may be overcome by a patentee’s express definition of a term, or express
7 disavowal of the scope of the claim. *Id.* at 1364. A term may be redefined “by implication” when
8 given a meaning that is ascertainable from a reading of the specification or the patent documents.
9 *Id.* Redefinition and disavowal need not be explicitly stated or called out *in haec verba*. *Id.* at
10 1363. “The ordinary meaning of a claim term is not the meaning of the term in the abstract,” but
11 the term’s “meaning to the ordinary artisan after reading the entire patent.” *Astra Zeneca AB v.*
12 *Mylan Pharm. Inc.*, 19 F.4th 1325, 1330 (Fed. Cir. 2021) (quotations omitted) (quoting *Eon Corp.*
13 *IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1320 (Fed. Cir. 2016)).

14 A claim and its constituent words and phrases are interpreted in light of the intrinsic
15 evidence. The touchstones are the claims themselves, the specification and, if in evidence, the
16 prosecution history. *Phillips*, 415 F.3d at 1312-17. This intrinsic evidence is the most significant
17 source of the legally operative meaning of disputed claim language. *Vitronics Corp. v.*
18 *Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The claim language can “provide
19 substantial guidance as to the meaning of particular claim terms,” both through the context in
20 which the claim terms are used and by considering other claims in the same patent. *Phillips*, 415
21 F.3d at 1314. The specification is also a crucial source of information. Although it is improper to
22 read limitations from the specification into the claims, the specification is “the single best guide to
23 the meaning of a disputed term.” *Id.* at 1315 (“[T]he specification ‘is always highly relevant to
24 the claim construction analysis. Usually, it is dispositive . . .’”) (internal quotations omitted); *see*
25 *also Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 347 F.3d 1367, 1370 (Fed. Cir. 2003)
26 (“[C]laims must be construed so as to be consistent with the specification . . .”). The Court may
27 also use extrinsic evidence (*e.g.*, dictionaries, treatises) to resolve the scope and meaning of a
28 claim as circumstances warrant. *Phillips*, 415 F.3d at 1317.

The parties agree that the '387 patent includes “means-plus-function” claims subject to 35 U.S.C. § 112 ¶ 6, which requires the application of another set of interpretive rules.¹ Under Section 112 ¶ 6, a claim limitation “expressed as a means or step for performing a specified function without the recital of structure, material, or acts” must be “construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” Construction of a means-plus-function term involves two steps: (1) defining the particular function of the claim limitation, and (2) identifying the corresponding structure for that function. *See Rain Computing, Inc. v. Samsung Elecs. Am., Inc.*, 989 F.3d 1002, 1007 (Fed. Cir. 2021). The corresponding structure must include all structure that is necessary and “actually performs the recited function.” *Apple Inc. v. Samsung Elecs. Co., Ltd.*, 816 F.3d 788, 814 (Fed. Cir.) (quoting *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1119 (Fed. Cir. 2002)), *rev'd on other grounds*, 839 F.3d 1034 (Fed. Cir. 2016) (en banc). The “identified structure cannot include that which does not perform the recited function.” *Applied Med. Resources Corp v. U.S. Surgical Corp.*, 312 F. App'x. 326, 335 n.4 (Fed. Cir. 2009) (citing *Asyst Technologies, Inc. v. Empak, Inc.*, 268 F.3d 1364, 1370 (Fed. Cir. 2001)).

II. INDEFINITENESS

Patent claims must “particularly poin[t] out and distinctly clai[m] the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112 ¶ 2. A claim fails to satisfy this requirement and is invalid if its language, when read in light of the specification and the prosecution history, “fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). To be sure, definiteness requires neither “absolute” nor “mathematical precision.” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014), *cert. denied*, 136 S. Ct. 59 (2015) (citations omitted). “[A]bsolute precision in claim language is unattainable.” *Id.* (*Nautilus*, 572 U.S. at 910). Because patents are entitled to a presumption of validity, any fact critical to a holding on indefiniteness must be proven by clear and convincing evidence. *See Johnstech Int'l*

¹ The 2011 America Invents Act (AIA) renumbered Section 112 ¶ 6 to Section 112(f). Because the '387 patent predates the effective date of the AIA, the older section numbering will be used.

Corp. v. JF Microtechnology Sdn Bhd, No. 14-cv-2864-JD, 2016 WL 631936, at *3 (N.D. Cal. Feb. 17, 2016) (citing *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003) and *Nautilus*, 572 U.S. at 912 n.10).

CLAIM CONSTRUCTION

A. “display pipeline” (’121 patent, Claims 1-4, 33, 35, 36)

Broadcom’s Proposed Construction	Netflix’s Proposed Construction	Court’s Construction
Plain and ordinary meaning, which, in the context of the patent, is “chain of multiple nodes”	“a series of video processing modules”	“chain of multiple nodes”

The parties’ disagreement over “display pipeline” has two parts: (1) whether the pipeline is a “chain of nodes” or a “series of modules” and (2) whether the term should be limited to video processing.

For the first question of nodes versus modules, the Court concludes that the display pipeline is a “chain of multiple nodes.” Claim 1 states that the network is configured to “form at least one display pipeline therein by dynamically selecting use of at least two selectable nodes.” Dkt. No. 112-1 at 16:33-35. This indicates that the nodes are the component parts of the display pipeline, which is confirmed by the specification: “the display pipeline 440 is changeably formed by chaining, coupling, or concentrating one or more network nodes together” *Id.* at 6:44-46. The specification also states that, while the “display pipeline” is made up of nodes, the modules may be used to switch between nodes or as components of the nodes. *Id.* at 8:47-49 (“[T]he network 600 may include a number of display pipelines formed by chaining multiple nodes together using the network modules 620 to switch between the nodes”); *id.* at 7:13-15 (“The system 500, in one embodiment, further comprises one or more nodes 516 (two nodes 516A & 516B are illustrated). Nodes 516 are modules that process video information.”). Within the lexicography of the specification, it is clear that nodes and modules have different meanings, and that the “display pipeline” is made up of nodes.

For the second question of whether the “display pipeline” is restricted to video processing nodes, neither the language of the claims nor the specification support such a limitation. The

claims refer only to data processing, and do not limit themselves to video processing. *See* Dkt. No. 112-1 at 16:33-18:59. While the specification does discuss video processing, it is clear that the invention is directed to an A/V system and processing data in that system. *See, e.g., id.* at 2:5-8; *see also id.* at 2:34-35 (“Yet another embodiment of the present invention relates to a network for processing data.”). To the extent that the specification discusses video processing modules as part of the system, it refers to specific embodiments. *See, e.g., id.* at 4:45-47 (“In one embodiment, the A/V data processing device 114 includes a network environment for video processing modules.”); *id.* at 5:50-53 (“[I]n one embodiment, the data processing device 214 comprises or includes a network environment for video processing modules in accordance with the present invention.”). “Even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction.” *Leibel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (quotations omitted). The Court declines to limit the “display pipeline” to video processing, which would improperly limit the scope of the claims to some embodiments in the specification.

Netflix says that Broadcom disclaimed any scope for “display pipeline” beyond “video processing modules” during prosecution. Dkt. No. 138 at 1. Prosecution disclaimer occurs when “an applicant, whether by amendment or by argument, unequivocally disavowed a certain meaning to obtain his patent.” *Schindler Elevator Corp. v. Otis Elevator Co.*, 593 F.3d 1275, 1285 (Fed. Cir. 2010). “In order for prosecution disclaimer to attach, the disavowal must be clear and unmistakable.” *Mass. Inst. of Tech. v. Shire Pharm., Inc.*, 839 F.3d 1111, 1119 (Fed. Cir. 2016) (quoting *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1325 (Fed. Cir. 2013)). “Where the alleged disavowal is ambiguous, or even amendable to multiple reasonable interpretations,” courts decline to find prosecution disclaimer. *Id.* (quoting *Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016))

Netflix relies on Broadcom’s arguments in response to a PTO office action that “display pipeline nodes are made up of video processing modules.” Dkt. No. 138 at 1-2; Dkt. No. 132-2 at 15. But the full context demonstrates that Broadcom was distinguishing the prior art as not having

nodes that processed data. Dkt. No. 138-2 at 15-16. The argument in the response to the office action does not amount to an unmistakable disavowal of any scope beyond “video processing modules.” Consequently, based on the language of the claims and the specification, the Court adopts Broadcom’s proposed construction of “display pipeline.”

B. Means-plus-function terms (’387 patent, claim 3)

“means for determining if a code symbol index value is less than a threshold value”

Broadcom’s Proposed Construction	Netflix’s Proposed Construction	Court’s Construction
Function: determining if a code symbol index value is less than a threshold value Structure: Structure disclosed in Fig. 2, which describes an encoder, and in particular binarization block 62 in conjunction with Fig. 4, and Fig. 4, step 102, 4:1-13, Tables 3 and 4, 6:26-8:23, and claim 1	Function: determining if a code symbol index value is less than a threshold value Structure: binarization module 62 and step 102 of Figure 4 as described at 7:46 and 7:63-66	Function: determining if a code symbol index value is less than a threshold value Structure: binarization module 62 and step 102 of Figure 4, as described at 7:63-66

“means for constructing a codeword using a unary binarization if said code symbol index value is less than a threshold value”

Broadcom’s Proposed Construction	Netflix’s Proposed Construction	Court’s Construction
Function: constructing a codeword using a unary binarization if said code symbol index value is less than said threshold value Structure: Structure disclosed in Fig. 2, which describes an encoder, and in particular binarization block 62 in conjunction with Fig. 4, and Fig. 4, steps 102, 104, and 112, 4:1-13, Tables 3 and 4, 6:26-8:23, and claim 1	Function: constructing a codeword using a unary binarization if said code symbol index value is less than said threshold value Structure: binarization module 62 and steps 102 and 104 of Figure 4 as described at 7:46-47 and 7:61-8:1	Function: constructing a codeword using a unary binarization if said code symbol index value is less than said threshold value Structure: binarization module 62 and steps 102 and 104 of Figure 4, as described at 7:61-8:1

“means for constructing a codeword using a exp-Golomb binarization if said code symbol index value is [not] less than a threshold value”

Broadcom's Proposed Construction	Netflix's Proposed Construction	Court's Construction
Function: constructing a codeword using exp-Golomb binarization if said code symbol index value is not less than said threshold value Structure: Structure disclosed in Fig. 2, which describes an encoder, and in particular binarization block 62 in conjunction with Fig. 4, and Fig. 4, steps 102, 106, 108, 110, and 112, 4:1-13, Tables 3 and 4, 6:26-8:23, and claims 1-2	Function: constructing a codeword using exp-Golomb binarization if said code symbol index value is [not] less than said threshold value Structure: binarization module 62 and steps 106, 108, and 110 of Figure 4 as described at 7:49-60 and 8:1-8:10	Function: constructing a codeword using exp-Golomb binarization if said code symbol index value is not less than said threshold value Structure: binarization module 62 and steps 106, 108, and 110 of Figure 4, as described at 8:1-8:10.

The parties agree that the three limitations of claim 3 of the '387 patent are means-plus-function terms under Section 112 ¶6, and they do not dispute any of the terms' functions. Rather, they disagree only about how broadly the structures should be construed based on the specification, with the main bone of contention being the third term, a "means for constructing a codeword using a exp-Golomb binarization if said code symbol index value is [not] less than a threshold value." The parties agree that the structures should include binarization module 62, but disagree on the algorithm that module 62 performs. Broadcom proposes a broader definition of the structure as described in Figure 4 generally and further described at column 7:62-8:10, and Netflix urges a narrower definition of the algorithm, as defined in the specification at 7:46-60.

Broadcom is right to say that the structure for claim 3 is found in Process 100 of the patent, as described at 7:62-8-10. Dkt. No. 131 at 11-12. To start, the specification states that "Process 100 illustrates the steps of the present invention." Dkt. No. 112-2 at 7:62-63; *see Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1254 (Fed. Cir. 2005) (construing a two-step process to be the structure of a means-plus-function claim where "the specification characterize[d] the two step process as 'the invention'"). Netflix suggests that the specification also says that the narrower algorithm it proposes as the structure is "a detailed description of the method for constructing such hybrid binarization." Dkt. No. 112-2 at 7:40-41; Dkt. No. 138 at 6. But the specification continues by stating that the narrower algorithm may be used for "the construction of a codeword

of this modified unary binarization table for a given index v ,” with reference to exemplary Tables 3 and 4. Dkt. No. 112-2 at 7:41-45. This language establishes that the narrower algorithm is just one implementation of Process 100. As the Federal Circuit has indicated in a nonprecedential decision, algorithms are not required “to include every possible implementation of the function, so long as it was linked to and encompassed the claimed function.” *Univ. of Pittsburgh of Commonwealth Sys. of Higher Educ. v. Varian Med. Sys., Inc.*, 561 F. App’x 934, 941 (Fed. Cir. 2014) (nonprecedential).

Netflix and its expert, Dr. Orchard, say that Figure 4 alone is insufficient for a POSITA to be able to create the codewords, but acknowledge that the description in the specification at 7:26-8:1, provide adequate structure for the first two steps of claim 3. *See, e.g.*, Dkt. No. 138-2 at ECF 203-04, ECF 209. Indeed, Netflix’s primary argument is that Figure 4 alone does not disclose sufficient structure for a “means for constructing a codeword using exp-Golomb binarization.” Dkt. No. 138 at 7. Netflix says that this is because only the narrow algorithm at 7:46-60 describes how to construct a unary prefix and the suffix bits of the exp-Golomb codeword. *Id.* But the description of Process 100 explains that “the most significant bits of the value $v-(N-2)$ are extracted and converted to a unary representation,” which is appended to the initial prefix to create a unary prefix. Dkt. No. 112-2 at 8:4-7. The specification then continues by explaining that the “binary representation of the least significant bits of the value of $v-(N-2)$ are appended to the initial prefix to create the codeword.” *Id.* at 8:7-10. These statements provide an explanation of how the unary prefix and suffix are created.

Netflix’s expert believes that these disclosures are insufficient to create an exp-Golomb codeword because a POSITA would not know how to determine the most significant bits and create a unary representation, or how to determine how many bits to include in the least significant bits or how to create a binary representation. Dkt. No. 138-2 at ECF 216-17. But other portions of the patent teach about unary binarization and binary binarization. *See, e.g.*, Dkt. No. 112-2 at 5:29-45 (unary); *Id.* at 5:46-54 (binary). Consequently, the Court cannot say that a POSITA, which the parties’ experts agree would have a relevant bachelor’s degree and at least two to three

years of relevant experience,² would not understand how to determine which bits were significant and how to create unary and binary representations.

The Court declines to limit the structure for these means-plus-function claims to the narrow algorithm described at 7:46-60, as urged by Netflix. Process 100, as described at 7:62-8:10 and depicted in Figure 4, provides adequate structure for these claims.

C. '663 patent, claim 12

Broadcom's Proposed Construction	Netflix's Proposed Construction	Court's Construction
Plain and ordinary meaning, no construction is necessary regarding order of limitations	Steps recited within the claim must be performed in order	Steps recited within the claim must be performed in order

The parties disagree about whether the three steps in claim 12 of the '663 must be performed in the order they are recited. Claim 12 recites:

12. A method for generating a codeword from an index value for digital video encoding, comprising the steps of:
- (A) generating a first pattern in a first portion of said codeword in response to said index value being at least as great as a threshold;
 - (B) generating a second pattern in a second portion of said codeword following said first portion representing an offset of index value above threshold; and
 - (C) generating a third pattern in a third portion of said codeword following said second portion representing a value of said index value above said offset.

Dkt. No. 112-3 at 8:25-35.

"As a general rule, 'unless the steps of a method claim actually recite an order, the steps are not ordinarily construed to require one.'" *Mformation Techs., Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1398 (Fed. Cir. 2014) (quoting *Interactive Gift Express, Inc. v. CompuServe Inc.*, 256 F.3d 1323, 1342 (Fed. Cir. 2001)). Even so, a claim may "require[] an ordering of steps when

² For the level of knowledge of the POSITA, Broadcom's expert, Dr. Iain Richardson, states that the POSITA would have "at least a bachelor's degree in electrical engineering, computer engineering, computer science, or equivalent, and at least 2-3 years of experience developing or implementing data processing software or hardware." Dkt. No. 131-7 at 5. Netflix's expert, Dr. Michael Orchard, states that the POSITA would hold a "bachelor's degree in computer science, computer engineering, or an equivalent degree," and would have "2-3 years of professional experience with distributed multimedia systems." Dkt. No. 138-2 at ECF 197.

the claim language, as a matter of logic or grammar, requires that the steps be performed in the order written, or the specification directly or implicitly requires an order of steps.” *Id.* (quotations and citations omitted).

The plain language of the claim and the specification establishes that the steps in claim 12 must be performed in the recited order. Steps (B) and (C) of claim 12 refer back to values determined in the prior steps. Step (B) refers to the “said threshold” that was first identified in step (A). Dkt. No. 112-3 at 8:30-32. Step (C) refers to the “said offset” that was first identified in step (B). *Id.* at 8:33-35. These references demonstrate that each step of the claim relies on and comes after the threshold and offset values have been determined.

The specification confirms the sequence of the recited steps. The specification teaches that, upon determination that the index value is above the threshold value, processing moves to creating an initial prefix (step (A)), then moves to creating a unary prefix (step (B)), and then finally to a suffix that is appended to the unary prefix (step (C)). *Id.* at 7:4-12. This is further demonstrated in Figure 4 of the ’663 patent, which shows claim 12 as an ordered process. The specification does not suggest that the steps may be performed in any order.

Broadcom suggests that each of the steps can be accomplished through calculations that do not rely on each other, and therefore can be performed in any order. Dkt. No. 131 at 6. In Broadcom’s view, the three portions of the codeword may be generated in any order, and then assembled into the correct order after all have been generated. *Id.* at 6-7. This ignores the teachings of the specification. The Federal Circuit has made clear that a claim may require an ordering of steps if “the specification directly or implicitly requires an order of steps.” *Mformation Techs.*, 764 F.3d at 1398. Consequently, the Court construes claim 12 to require the recited steps to be performed in the order recited.³

³ Although the Court reached this conclusion based solely on its own analysis of the ’663 patent, it is not the first district court to determine that the steps in claim 12 are sequential. *See, e.g., Avago Techs. Gen. IP (Singapore) Pte Ltd. v. Asustek Comput., Inc.*, No. 15-cv-4525-EMC, 2016 WL 3029674 (N.D. Cal. 2016); *Broadcom Corp. v. Amazon.com Inc.*, No. SACV 16-1774 JVS, 2017 WL 5151356 (C.D. Cal. Sep. 1, 2017). With the benefit of independent analyses by three district courts, Broadcom would be well advised not to keep pressing the same unsuccessful argument in other courts.

D. “a fourth pattern in said first portion based on said index value in response to said index value being below said threshold” (’663 patent, claim 13)

Broadcom’s Proposed Construction	Netflix’s Proposed Construction	Court’s Construction
Plain and ordinary meaning, no construction necessary	Indefinite	Plain and ordinary meaning, not indefinite.

Netflix says this claim is indefinite. In Netflix’s view, if the index value is below the threshold value, the second and third patterns of claim 12 are not generated, so adding this fourth step is indefinite. Netflix recognizes that the first step of claim 12, generating a first pattern in response to the index value being greater than or equal to the threshold value, is not performed if the index value is below the threshold value. Dkt. No. 138 at 12. But Netflix says that it is not clear whether the second and third steps of claim 12, which generate a second pattern representing an offset of the index value above the threshold, and generating a third pattern representing a value of the index above the offset, are performed.

The point is not well taken. It is readily apparent in the claims and the specification that if the index value is below the threshold, it would not be necessary to generate any of the patterns in claim 12, but it would be possible to generate the fourth pattern of claim 13. The specification teaches Process 100, and that at the first step 102, “a test is made to determine if the value of the code symbol index is less than the value of the threshold.” Dkt. No. 112-3. at 6:66-7:2. If the index value is less than the threshold value, then “processing moves to step 104 were [sic] a unary codeword is constructed comprising a series of v 1’s terminated with a 0.” *Id.* at 7:2-4. Then processing ends. *Id.* at 7:4. From this disclosure, a POSITA would understand that in claim 13, the first portion would be filled by the fourth pattern, and that processing stops, such that the second and third patterns are not generated, and the second and third portions of the codeword are not filled. A POSITA would also understand that the fourth pattern in the first portion of the codeword would comprise a complete codeword within Process 100.

The claim language and Figure 4 buttress this conclusion. Claim 12 comprises steps (A), (B), and (C). The offset of step (B) is “an offset of said index value above said threshold,” Dkt. No. 112-3 at 8:31-32, indicating that the offset only has a value if the index is greater than the threshold. Similarly, the value in step (C) is “a value of said index value above said offset,” *Id.* at

8:34-35. This language indicates that step (B) and (C) are just as dependent on the index value being at least as great as the threshold value, as step (A). This is further confirmed by Figure 4 of the '663 patent, which shows that the unary prefix (step (B)) and suffix (step (C)) are only generated if the initial prefix (step (A)) is generated. *Id.* at Fig. 4. The figure further shows that when step (A) is not performed, a unary codeword is created instead. *Id.*

Based on the specification, figures, and claim language of the '663 patent, a POSITA would understand the scope of claim 13. The claim is not indefinite, and the Court gives the claim its plain and ordinary meaning.

E. “wherein said [second/third] portion is void in response to said index value being below said threshold” ('663 patent, claims 18, 19)

Broadcom’s Proposed Construction	Netflix’s Proposed Construction	Court’s Construction
Plain and ordinary meaning, which, in the context of the patent, is “wherein the [second/third] portion does not contribute any bins to the codeword response to said index value being below said threshold”	Indefinite	Indefinite

The indefiniteness challenges to claims 18 and 19 warrant a different conclusion. Broadcom says that claims 18 and 19 are met by any method that leaves the second and third portions, respectively, void, regardless of what patterns, if any, are generated in the other portions of the codeword. Dkt. No. 143 at 5. This is contrary to the recitation in Claim 12 of sequential steps, which must be performed in order.

The sequential nature of the steps in claim 12 poses problems for claims 18 and 19. Step (A) of claim 12 relates to “generating a first pattern in a first portion of said codeword in response to said index value being at least as great as a threshold.” Dkt. No. 112-3 at 8:27-29. The first portion of the codeword is therefore generated before either the second or third portion are generated. But, claims 18 and 19 state that they apply when the “index value is below said threshold.” *Id.* at 8:53-58. This means that a POSITA would not be able to determine the first portion of the codeword at step (A) because step (A) only applies to an index value at least as

great s the threshold. Because a POSITA cannot generate the first portion, the POSITA would not be able to form a codeword, as required by preamble of Claim 12, which the parties agree is limiting. Dkt. No. 112 at 2.

Claim 12, in combination with either claim 18 or claim 19, provides no guidance to a POSITA about how the first portion of the codeword is generated if the index value is below the threshold value. This stands in contrast to claim 13, which provides an explanation of how the first portion of the codeword is generated. Additionally, unlike claim 13, where a POSITA would understand how the claim fits into Process 100, as described in the specification, Dkt. No. 112-3 at 6:65-7:13, it is not readily apparent how claims 18 and 19 fit into Process 100. Although they state that the index value is below said threshold, they do not explain what codeword is generated, and it is therefore unclear to a POSITA whether the unary codeword generated for an index value less than the threshold value at step 104 would apply. *Id.* at 6:66-7:4.

Because of these ambiguities, Netflix has shown by clear and convincing evidence that the scope of claims 18 and 19 would not be reasonably clear to a POSITA, and consequently, the Court finds claims 18 and 19 are indefinite.

F. “wherein the second syntax element specifies the PU partition mode for the selected CU, wherein the PU partition mode is based on a size $N \times N$ PU when the selected CU is a smallest CU (SCU) of the plurality of CUs and is based on a different size PU than the size $N \times N$ PU when the selected CU is another CU than the SCU of the plurality of CUs” (’283 patent, claims 1, 14)

Broadcom’s Proposed Construction	Netflix’s Proposed Construction	Court’s Construction
Plain and ordinary meaning, no construction necessary, phrase is too long for construction	Indefinite	Plain and ordinary meaning, not indefinite.

The dispute for this claim term centers on whether the phrase “is based on” renders the scope of the claim unclear and, therefore indefinite. Netflix says that the issue arises because the specification teaches that when the CU is the smallest CU (SCU), the PU partition mode can be exactly $N \times N$, so the phrase “is based on” has no meaning in the claim. Dkt. No. 138 at 17.

Broadcom says that it is improper for Netflix to focus solely on the phrase “is based on” which is

1 just part of the claim term that the parties identified for construction, and that a POSITA would
2 understand what the claim term as a whole means. Dkt. No. 143 at 9.

3 A POSITA would understand what the claim term means. The specification and figures of
4 the '283 patent identify four PU partition modes: $2N \times 2N$, $N \times 2N$, $2N \times N$, and $N \times N$. Dkt. No. 112-
5 4 at Fig. 12, 17:19-23, 18:17-23. The specification also explains that the " $N \times N$ PU is different
6 from other PU modes, and it only exists with respect to the SCU, or the smallest CU." *Id.* at
7 17:21-23. In determining how to code PU partition symbols, the '282 patent teaches that a binary
8 tree is employed. *Id.* at 18:12-33 and Fig. 13. But because the $N \times N$ PU mode only exists when
9 the CU is the SCU, different binary trees are employed dependent on whether the CU is the SCU.
10 *Id.*

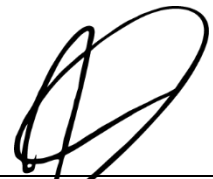
11 Netflix wants to construe "based on" as the equivalent of "about," which other district
12 courts have found made claims indefinite in some instances. *See, e.g., Synthes (USA) v. Smith &*
13 *Nephew, Inc.*, 547 F. Supp. 2d 436 (E.D. Pa. 2008); Dkt. No. 138 at 17. Netflix cites to no Federal
14 Circuit precedent for support, and ignores the fact that indefiniteness is viewed in light of the
15 specification and accompanying drawings of the patent in issue. *Nautilus, Inc. v. Biosig*
16 *Instruments, Inc.*, 572 U.S. 898, 913 (2014). Nothing before the Court indicates that "based on"
17 here gives rise to the same ambiguity that "about" or "approximately" might have generated in
18 other circumstances. And the specification makes clear that this claim is describing the different
19 binary trees that might be used to encode partition modes based on whether the CU in question is
20 the SCU.

21 Based on the disclosures in the specification and the figures, a POSITA would reasonably
22 understand the scope of this claim. As the Federal Circuit has reiterated since the Supreme
23 Court's ruling in *Nautilus*, "the dispositive question in an indefiniteness inquiry is whether the
24 claims, not particular claim terms, read in light of the specification delineating the patent, and the
25 prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the
26 scope of the invention." *Cox Commc'ns, Inc. v. Sprint Commc'n Co.*, 838 F.3d 1224, 1232 (Fed.
27 Cir. 2016) (quoting *Nautilus*, 572 U.S. at 901) (internal quotations omitted). The scope of this
28

claim is clear from the disclosures and figures of the '283 patent. Consequently, the Court finds the claim is not indefinite and gives this term its plain and ordinary meaning.

IT IS SO ORDERED.

Dated: May 23, 2022



JAMES DONATO
United States District Judge

United States District Court
Northern District of California